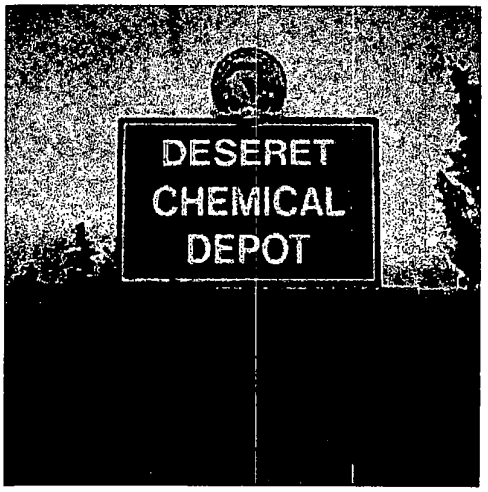
DESERET CHEMICAL DEPOT

CAMDS RCRA PART B PERMIT

Class 2 Permit Modification

Addition of Chemical Test Facility (CTF) As a Hazardous Waste Storage Area

(And Other Miscellaneous Changes)



Submitted to:
Utah Division of Solid & Hazardous Waste
July 2006

ENCLOSURE 1
PUBLIC NOTICE

PUBLIC NOTICE

Notice is hereby given that the Deseret Chemical Depot (DCD), State EPA ID Number UT5210090002, has submitted a request to the Utah Division of Solid and Hazardous Waste for the following modification to the CAMDS Part B Operation Permit:

> Class 2 Modification adding the Chemical Test Facility (CTF) as a permitted hazardous waste storage area; removing permit conditions, information, and references for management units that have been closed; and making other miscellaneous changes.

A 60 day public comment period for this modification request will begin on July 13, 2006, and end on September 11, 2006. All comments must be submitted in writing to Mr. Dennis Downs, Executive Secretary, Division of Solid and Hazardous Waste, Utah Department of Environmental Quality, Cannon Health Building, 288 North 1460 West, Salt Lake City, Utah, 84116.

> **DCD will conduct a public information meeting concerning this modification request on August 9, 2006, at 6:00 PM at the Tooele Chemical Stockpile Public Outreach Office, 54 South Main Street, Tooele, UT.**

Questions may be directed to DCD by contacting Mr. Lyman Thorpe at (435) 833-4413; or the Utah Department of Environmental Quality, Division of Solid and Hazardous Waste, by contacting Mr. Brad Lauchnor at (801) 538-6170. The Permittee's (DCD) compliance history is also available from Mr. Lauchnor.

A copy of this modification request is available for review by the general public at the Utah Department of Environmental Quality, Division of Solid and Hazardous Waste, Cannon Health Building, 288 North 1460 West, Salt Lake City, Utah; and at the Tooele Chemical Stockpile Public Outreach Office, 54 South Main Street, Tooele, UT.

ENCLOSURE 2
PERMIT CHANGED PAGES
(Redline Copies)

List of Acronyms and Abbreviations
Module III, Containers and Containment Rooms
Module IV, Tank Systems
Attachment 1, Facility Description
Attachment 5, Inspection Plan
Attachment 10, Closure Plan
Attachment 11, Facility Drawings
Includes:
- TCDS 39-700-02, Sheet 1 of 1, CTF Process Area & Control Room Floor Plans
- TCDS 39-705-05, Sheet 1 of 1, CTF General Area Foundation Plan
- TCDS 57-701-06, Sheet 1 of 1, CTF Sumps 1A & 1B Modified Toxic Cubicle Plan
- TCDS 39-705-04, Sheet 1 of 1, CTF Process Room Pit Plan & Sections
- Drawing Certification Letter

Attachment 12, Containers, Storage, and Waste Piles
Attachment 13, Tank Systems

List Of Acronyms And Abbreviations

Acronym or Abbreviation	Description
CSCP	Contingency & Spill Control Plan
CSDP	Chemical Stockpile Disposal Program
CSO	Chemical Surety Officer
CSS	Contingency Support Staff
CTF	**Chemical Test Facility**
CWA	Clean Water Act
DA PAM	Department of the Army Pamphlet
DAAMS	Depot Area Air Monitoring System
DAQ	Department of Air Quality
DATS	Drill and Transfer System
DCD	Deseret Chemical Depot (formerly Tooele Army Depot - South Area)
DCP	Disaster Control Plan
DEAC	Deactivation
Decon	Decontamination
Demil	Demilitarization
DEQ	Department of Environmental Quality
DFS	Deactivation Furnace System
DHHS	Department of Health and Human Services
DOA	Department of the Army
DOD	Department of Defense
DPE	Demilitarization Protective Ensemble
DPG	Dugway Proving Grounds
DQO	Data Quality Objectives
DRE	Destruction and Removal Efficiency
DTNB	5,5"-Dithio Bis-2,211 Nitro Benzoic Acid
DWS	Drinking Water Standard
EA	U.S. Army Edgewood Arsenal or Edgewood Area, Aberdeen Proving Ground
ECC	Explosive Containment Cubicle
ECC/SEG	Explosive Containment Cubicle/Segregation Area
ECR	Explosive Containment Room
ECV	Explosive Containment Vestibule
EEI	Essential Elements of Information
EEPROM	Electrically Erasable Programmable Read Only Memory
EHM	Equipment Hydraulic Modules
EIS	Environmental Impact Statement
ELF	Electric Furnace
EMD	Environmental Management Division
EMDS	Electric Munitions Disposal System (Electric Furnace)
EOC	Emergency Operations Center
EOD	Explosive Ordinance Disposal
EPA	U.S. Environmental Protection Agency
ETF	Equipment Test Facility
FBI	Federal Bureau of Investigation, Fluidized Bed Incinerator
FCP	Field Command Post
FCP	Forward Control Point
FR	Federal Register
GA	Tabun, ethyl N, N-dimethylphosphoramide-cyanidate
GB	Sarin, lsopropylmethylphosphonofluoridate
GC	Gas chromatography

MODULE III
CONTAINERS AND CONTAINMENT ROOMS

[Note: The CAMDS shall be permitted for container storage areas, including the Building 4104, Building 4105, **Chemical Test Facility (CTF),** Equipment Test Facility (ETF), Munitions Holding Area (MHA) Igloo and Revetment Area, Metal Parts Furnace (MPF) Area, Residual Storage Area (RSA), Segregator/Explosive Containment Cubicle No. 1 (SEG/ECC No. 1) Unpack Area (UPA), Material Treatment Facility (MTF) Area, Toxic Maintenance Facility (TMF), ~~and the Auxiliary Test Facility/Residual Storage Facility (ATF/RSF),~~ Ventilated Storage Area (VSA), General Purpose Facility (GPF), Multi-Purpose Demilitarization Machine/Conveyor Gallery(MDMCG), MPF Charge Car Room, Multi-Purpose Demilitarization Facility (MDF) Toxic Unpack Area (UPA), Bulk Drain Facility (BIF) Drain Bay, MDF/BIF Airlock, and the MDF/BIF Loading Area.]

III.A. PERMITTED WASTE IN CONTAINER STORAGE AREAS

III.A.1 The permittee may store site-generated wastes in containers subject to the terms of this permit and provided that the maximum volume of containerized waste stored in the permitted storage areas does not exceed the amounts specified in attachment 12.

III.B. PERMITTED WASTE IN CONTAINMENT ROOM WASTE PILES

III.B.1 The permittee may store site-generated wastes in waste piles in containment rooms subject to the terms of this permit and provided that the maximum volume of the waste piles does not exceed the amounts specified in attachment 12.

III.C. CONDITION OF CONTAINERS

If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the Permittee shall immediately transfer the hazardous waste from such container to a container that is in good condition or otherwise manage the waste in compliance with the conditions of this permit.

III.D. COMPATIBILITY OF WASTE WITH CONTAINERS

The Permittee shall assure that the ability of the container to contain the waste is not impaired, in accordance with R315-8-9.3.

III.E. MANAGEMENT OF CONTAINERS

The permittee shall keep all containers closed during storage, except when it is necessary to add or remove waste and shall not open, handle, or store containers in a manner, which may rupture the container or cause it to leak.

III.F. SECONDARY CONTAINMENT SYSTEMS

III.F.1. All overpacks meet secondary containment requirements of 40 CFR 264.175 for the munitions contained within. The types of overpacks used are listed in Attachment 12.

MODULE IV
TANK SYSTEMS

IV.A. APPLICABILITY

The requirements of this Module pertain to the storage and treatment of hazardous waste in the tank systems identified in IV.B.1., and the sumps listed in Attachment 13, Table 13-2. The Permittee shall comply with R315-8-10 and the conditions of this permit for all tank systems.

IV.B. WASTE IDENTIFICATION AND TANK USAGE

IV.B.1. The Permittee may only store up to the listed maximum capacity, and treat if applicable, the hazardous waste materials shown for the following tank systems:

Hazardous Waste Storage And Treatment Tank Systems

Tank Number	Max. Permitted Storage Capacity Gallons	Max. Permitted Storage Level Inches	Nominal Tank Dimensions	Allowable Waste Codes	Permitted Management Activity
~~SEG-T1~~ ~~SEG-T2~~	~~250~~	~~90~~	~~2'-6" diameter~~ ~~7'-10" high~~	~~P999~~	~~Storage of agent drained from rockets and mines~~
MDF-T3 MDF-T4	250	90	2'-6" diameter 7'-10" high	P999	Storage of agent drained from projectiles and bulk items
~~LIC-T5~~ ASR-T6	250	90	2'-6" diameter 7'-10" high	P999	Storage of agent, LIC feed tanks
ASR-T7	450	50	4'-6" diameter 5'-8" high	P999	Storage of agent, LIC feed tanks
T13-A T13-B T13-C	4,500	120	9'-0" diameter 9'-0" high	F999, D002, D004, D005, D006, D007, D008, D009, D010, D011, U037, U131, U210	Storage and treatment of spent PAS brines
T13-D T13-E	13,500	175	13'-0" diameter 14'-0" high	F999, D002, D004, D005, D006, D007, D008, D009, D010, D011, U037, U131, U210	Storage and treatment of spent PAS brines or Spent Decon Solution (SDS).
TMF-1 TMF-2	1,440	79	7'-8" diameter 7'-8" high	F003, F005, F999, D001 D002, D004, D005, D006, D007, D008,	Storage and treatment of spent decontamination solutions, miscellaneous waste liquids from spills, and liquid laboratory

				D009, D010, D011, D018, D019, D022, U037, U131, U210	wastes

IV.B.2. The sumps listed in Permit Attachment 13, Table 13-2, used to collect decontamination solutions; agent and miscellaneous liquid spills are also regulated by this Module. These sumps may be used to treat agent and agent contaminated hazardous wastes spills with decontamination solution before they are pumped to one of the permitted spent decontamination tank systems. Only wastes with the codes F999, D002, P999, U037, U131, and U210 are allowed in these sumps. The maximum capacity of these sump systems as shown in Table 13-2 shall not be exceeded. Wastes shall not remain in these sumps for more than 24 hours.

IV.B.3. Off-site generated hazardous waste materials shall not be placed in any of the permitted tank or sump systems.

IV.B.4. With the exception of spent decontamination brine solutions and their salt residues, only approved tanks, as listed in IV.B.1, shall store laboratory wastes.

IV.C. GENERAL OPERATING REQUIREMENTS

IV.C.1. The Permittee shall not place hazardous wastes, treatment reagents, or other incompatible materials in a tank system if they could cause the tank, its ancillary equipment, or the secondary containment sump to rupture, leak, corrode, or otherwise fail.

IV.C.2. The Permittee shall not place hazardous wastes in a tank or sump system unless that system has been completely decontaminated and cleaned if it stored an incompatible material.

IV.C.3. Diesel fuel and fuel oil may be stored in the Tanks ~~LIC-T5,~~ ASR-T6 and ASR-T7 only for the purpose of decontaminating a tank system for maintenance or to clean a tank system between different agent campaigns. Diesel fuel and fuel oil with a flash point less than 140° F shall not remain in any of the tank systems for more than 72 hours. After use, these contaminated fuels must be burned in the primary combustion chamber of the Liquid Incinerator.

IV.C.4. The design and operating descriptions of the permitted tank systems are provided in Attachment 13. Operation of the permitted tank and sump systems shall comply with the procedures in Attachment 13.

IV.C.5. Waste shall not be added to any of the tanks described in Condition IV.B.1. unless all level control instrumentation identified in Attachment 13 are operational in accordance with the manufacturer's specifications and the level devices are fully calibrated for the liquid density of the stored waste. Liquid levels in the tank systems shall not exceed the level height shown in Condition IV.B.1.

IV.C.6. If treatment is conducted in a tank system, sufficient freeboard shall remain so the permitted tank capacity shall not be exceeded when decontamination solutions are added.

IV.C.7. All tanks used to store or treat a hazardous waste at CAMDS shall be equipped with a level control device that prevents the tank system from exceeding the permitted capacity.

IV.C.8. The Permittee may only transfer liquids accumulated in the secondary containment sumps in the PAS areas to the five T13 brine storage tanks, provided that prior to transfer, the Permittee has analyzed the liquids in accordance with the waste analysis plan in Attachment 2. All other sumps shall be pumped to either TMF-1 or TMF-2 in the Toxic Maintenance Area.

IV.D. SPECIFIC OPERATING CONDITIONS - AGENT STORAGE TANKS

IV.D.1. The only chemical agents that can be placed in the Agent Collection System Tanks ~~SEG-T1, SEG-T2,~~ MDF-T3 and MDF-T4 are GB, VX and Mustard (H/ HD/HT) and their natural occurring breakdown products. In addition, decontamination or cleaning solutions used to decontaminate the system after agent campaigns and prior to maintenance activities may be placed in these tanks.

IV.D.2. The only materials allowed in tanks ~~LIC-T5,~~ ASR-T6 and ASR-T7 are liquid hazardous waste chemical agents, miscellaneous agent contaminated liquid wastes that will be treated in the LIC primary combustion chambers, and decontamination or cleaning solutions used to decontaminate the system after agent campaigns and prior to maintenance activities.

IV.D.3. The miscellaneous agent contaminated wastes that may be accumulated in the agent collection and tanks systems are identified in Attachment 2, Waste Analysis Plan.

IV.E. SPECIFIC OPERATING CONDITIONS - SPENT DECONTAMINATION STORAGE TANKS

IV.E.1. The only materials that shall be placed in Spent Decontamination Storage Tanks, TMF-1 and TMF-2, are spent sodium hydroxide and sodium hypochlorite decontamination solutions, the miscellaneous liquid wastes identified in Permit Attachment 2, and cleaning solutions used to decontaminate the system after agent campaigns and prior to maintenance activities.

IV.E.2. The only treatment allowed in the Spent Decontamination Storage Tanks shall be the addition of approved decontamination solutions when the chemical agents GB and VX are detected above 20 parts per billion (ppb), and the Mustard compounds H/HD/HT are detected above 200 ppb.

IV.E.3. The permittee shall manage waste accumulated in Tanks TMF-1 and TMF-2 as an operating batch. A batch of waste shall be the volume of liquid accumulated in the tank when filling of the tank has been stopped and the Permittee has determined that no additional waste will be added to the tank before it is to be emptied. Prior to emptying the tank, the Permittee shall sample and analyze each batch of waste for agent, pH, and total organic compounds in accordance with the Waste Analysis Plan (Attachment 2).

IV.E.4. Each batch of liquid waste accumulated in the Tanks TMF-1 and TMF-2 that is derived from the decontamination of chemical agent shall be incinerated in the secondary chambers of the Liquid Incinerator. Only liquid wastes having an agent concentration at or below 20 part per billion (ppb) for GB, 20 ppb for VX, and 200 ppb for H/HT/HD shall be incinerated in the secondary chamber of the Liquid Incinerator. Spent Decontamination Solutions (SDS) may also be shipped to an off-site TSDF in accordance with Attachment 2 (Waste Analysis Plan).

IV.F. SPECIFIC OPERATING CONDITIONS - BRINE STORAGE TANKS

IV.F.1. The only materials that shall be placed in Brine Storage Tanks, T13-A, T13-B, T13-C, T13-D and T13-E, are spent scrubber brines from the incinerator pollution abatement systems (PAS), decontaminating solutions, liquids collected in the BDA secondary containment system, solutions used to clean the BDA evaporator and piping system, and decontamination or cleaning solutions used to decontaminate the system after agent campaigns and prior to maintenance activities. Spent decontamination solution (SDS) may be stored in tanks T13-D and T13-E. These tanks must be rinsed with process water as per the description in Attachment 13, section 13.1.2 before and after storage of SDS.

IV.F.2. The cleaning solutions referenced in Condition IV.F.1. shall be of a nominal (3% by weight) hydrochloric acid solution or a citric acid solution.

IV.F.3. No ignitable or reactive waste may be stored in the Brine Storage Tanks.

IV.F.4. The only treatment allowed in the Brine Storage Tanks shall be the addition of approved decontamination solutions when the chemical agents GB and VX are detected above 20 parts per billion (ppb), and the Mustard compounds H/HD/HT are detected above 200 ppb.

IV.F.5. Contaminated liquids shall not be pumped from the Brine Storage Tanks until concentration levels are at or below 20 parts per billion (ppb) for agents GB and VX, and 200 ppb for Mustard, H/HD/HT.

IV.F.6. The permittee shall manage waste accumulated in the BDA tanks in batches. A batch of waste shall be the volume of liquid accumulated in the tank when filling of the tank has been stopped and the Permittee has determined that no additional waste will be added to the tank before it is to be emptied. At such time, the Permittee shall sample and analyze the waste contained in that tank in accordance with the Waste Analysis Plan in Attachment 2.

IV.F.7. Waste in the Brine Storage Tank System shall be ~~processed either through the Brine Drying Area or~~ transferred off-site to an approved facility for treatment and disposal.

IV.G. SUMPS DESIGNATED AS 24-HOUR INTERMITTENT COLLECTION UNITS (ICUs)

IV.G.1. Hazardous wastes may be stored in the sumps identified in Table 13-2 in Attachment 13 for a period not to exceed 24 hours. Sumps shall be pumped at least once every 24 hour period if liquids are detected.

incineration as the primary method of agent destruction. After testing and demonstration, alternate technologies may be used as a secondary method of agent destruction.

In order to provide the flexibility required developing each process, CAMDS must provide numerous "subsystems" that can be used in whole or in part for each munition process. Many of these are used on a continuous basis with some used only for certain situations or process needs. These include, but are not limited to:

- Munitions Holding Area (MHA)
- Unpack Area(s)(UPA) and Loading Areas
- Blast containment operating areas [Explosive Containment Cubicle (ECC) Nos. 1 and 2]
- Incinerator (MPF)
- Pollution Abatement Systems (PAS)
- Ventilation system filters
- Brine Dryer Area (BDA)
- Multipurpose Demilitarization Facility (MDF)
- Bulk Item Facility (BIF)
- Equipment Test Facility (ETF)
- **Chemical Test Facility**
- Toxic Maintenance Facility (TMF)
- Residual Storage Area (RSA)
- Ventilated Storage Area (VSA)
- General Purpose Facility (GPF)
- Material Treatment Facility (MTF)
- ~~Auxiliary Test Facility / Residual Storage Facility (ATF/ RSF)~~
- Personnel support facilities
- Chemical laboratories: CAMDS Lab and Building 4541 Lab
- Air monitoring systems

1.5.1 General process flows

To introduce the different processes used at CAMDS, general process flows for various items are provided below. These process flows illustrate the use of most of the CAMDS process equipment. Drawings, found in Attachment 11, show the CAMDS site layout, which identifies the various process locations.

1.5.1.1 Projectiles/Mortars/Bursters/Rockets

All projectiles/mortars/bursters/rockets are inspected at the Area 10 igloo for evidence of chemical agent leakage prior to transfer to CAMDS. The non-leaking munitions on pallets are then transported to the MHA in a munition transport van. In the MHA, the munitions are again inspected for external evidence of agent leakage. Leaking or suspected contaminated munitions are overpacked and taken separately to the ETF ventilated vestibule for unpacking by personnel in protective clothing. Leaking munitions are processed after non-leaking munitions to minimize contamination in the ETF vestibule. Non-leaking munitions are taken from the MHA to the ETF UPA.

The existing agent transfer lines inside ventilated areas are constructed of a corrosion resistant plastic lined piping system. The system uses schedule 10 pipe with a Teflon (TFE) liner. Joints and fittings are TFE lined, with either two bolt clamps or conventional bolted flanges. This type of piping system is located inside all toxic areas at CAMDS except the Segregator (SEG)/ECC No. 1 area. In the SEG/ECC No. 1 toxic area the agent piping system is constructed of schedule 80 steel pipe and plastic lined piping. Each agent piping system is leak tested before agent operations are started. The existing agent transfer lines inside toxic areas are constructed of 1-inch, schedule 80, seamless carbon steel pipe. Between the toxic areas, the agent transfer lines are of double wall construction. The double wall construction consists of 3-inch schedule 40 seamless carbon steel pipe outside, with the 1-inch schedule 80 pipe centered inside. Three spacers at equal distances around the circumference of the 1-inch pipe are used to maintain the center position. The annulus is maintained under negative pressure and is monitored for agent. The piping system within the MDF, BIF, and LIC is constructed of Resistoflex or equivalent TFE lined pipe with Serra-Seal connections, or steel pipe with welded connections.

1.5.2.7 Liquid Waste Collection and Storage System

1.5.2.7.1 Purpose

The purpose of the Liquid Waste Collection and Storage System is to collect liquid wastes, other than chemical agents, from areas where they are generated and transfer the liquid wastes to storage tanks for subsequent treatment in the MPF~~, Brine Dryers,~~ or ~~to~~ an approved/permitted commercial treatment facility.

1.5.2.7.2 Description

Liquid waste is collected from a large number of process areas within CAMDS. They are: (1) munition and bulk item processing areas (i.e., ECCs, BIF, and MDF); (2) incineration (MPF); (3) PAS (i.e., MPF); (4) personnel showers; (5) the CAMDS Laboratory; and (6) the Site Medical Facility (SMF).

Liquid waste is collected from a sump in each of these areas. If the liquid is PAS brine, it is sampled, certified to be less than Drinking Water Standards (DWS), and transferred to the brine holding tanks in the Brine Dryer Area (BDA) for **ultimate transfer to an offsite** treatment ~~in the brine dryers~~**facility**. Sump liquids from toxic areas are pumped to the TMF tanks for incineration in a furnace.

The DFS and MPF/LIC PAS each have their own retention tanks where process PAS brines are sampled and certified prior to transfer to the brine holding tanks in the BDA.

There are five brine-holding tanks available in the BDA to accept the certified liquid wastes. Three of the tanks are 9-feet in diameter and 9-feet high with nominal capacity of 5,000 gallons each. The other two tanks are 13-feet in diameter and 14-feet high, and each has a nominal storage capacity of 15,000 gallons.

The tanks used for the Liquid Waste Collection and Storage System are installed in curbed, contained areas to prevent any liquid loss in the event of a tank leak. Detailed information on the liquid waste collection and storage system is found in Attachment 13.

1.7.1 Hazardous Waste Container Storage Areas

Hazardous waste container storage areas at CAMDS are described in attachment 12. These areas, along with a brief description, are listed below:

- Equipment Test Facility
- Munitions Holding Area Igloo
- Metal Parts Furnace Area
- Residual Storage Area (RSA)
- Segregator/Explosive Containment Cubicle #1 Unpack Area
- Material Treatment Facility (MTF) Area
- Toxic Maintenance Facility
- Ventilated Storage Area (VSA)
- General Purpose Facility (GPF)
- ~~Auxiliary Test Facility / Residual Storage Facility (ATF/RSF)~~
- **Chemical Test Facility (CTF)**
- Building 4104
- Building 4105
- Multipurpose Demilitarization Machine Processing Area and Conveyor Gallery (MDMCG)
- Multipurpose Demilitarization Facility (MDF) Toxic Unpack Area (MDF Toxic UPA)
- Bulk Item Facility Drain Bay (BIF)
- MDF/BIF Airlock
- MDF/BIF Loading Area

1.7.2 Equipment Test Facility

The ETF building is located at the south end of CAMDS site. It is constructed with a reinforced concrete floor, steel panel walls, and roof. The building is heated and contains a fire sprinkler and fire deluge systems. The ETF storage area includes the UPA at the north end of the building and the Repack area at the south end of the building. The ETF also houses the ECC No. 2, which is located in the center of the building. Solid and liquid hazardous wastes are stored in the ETF.

1.7.3 Munitions Holding Area Igloo

The MHA consists of an L-shaped, 15-foot high, double-riveted earthen and steel barricade and a storage igloo measuring approximately 25-feet long, 13-feet wide and 7-feet high (internal height). Munitions are transported to the MHA from storage locations in an ammunition van or flatbed truck for CAMDS site in-process storage.

1.7.4 Metal Parts Furnace Area

The MPF storage area consists of a pad at the north end of the MPF building and an area in the northwest corner of the MPF building. A roll-up door separates the pad and the building. Overpacks or secondary containment drip pans are provided for any containers holding free liquid that are placed inside the MPF building. The base of the storage pad to the north provides secondary containment for containers of free liquid.

1.7.5 Residual Storage Area

The RSA provides ventilated storage for items that have been used during various demilitarization testing at CAMDS. Material that has not been detoxified to a 3X level will be stored in the RSA. More detailed information regarding ventilated 3X storage areas can be found in Attachment 12. Final disposition of this waste will be either incineration, chemical decontamination, or disposal in a permitted Subtitle C Landfill. Miscellaneous liquid wastes may also be stored in the RSA prior to incineration or sent to a Subtitle C Landfill for treatment and disposal.

1.7.6 Segregator/Explosive Containment Cubicle No. 1 Unpack Area

The SEG/ECC No. 1 UPA is located north of the DFS building. It is constructed with a reinforced concrete floor, steel panel walls, and roof and has approximately 400 square feet of storage area. The building is heated and contains a fire sprinkler and fire deluge systems. This area stores solid and liquid waste.

1.7.7 Material Treatment Facility (MTF)

The MTF building is located at the north end of CAMDS site. It is constructed with a reinforced concrete floor, steel panel walls, and roof. The IMTF storage area includes the toxic area at the West Side of the building. The MTF houses the Material Decontamination Chamber 2, unit A (MDC 2, unit A). The MTF stores solid and liquid hazardous waste.

1.7.8 Chemical Test Facility

The CTF is located immediately south of the BDA in the northwest corner of the CAMDS site. It provides ventilated storage for waste items that have been generated from testing and processing of agent wastes. Examples of the types of wastes stored in the CTF are agent processing wastes, spent carbon and non carbon filters, potentially contaminated PPE items, liquid and solid laboratory wastes, and maintenance residues. The waste items will be stored in the process room area of the CTF, prior to final treatment or disposal. More detailed information regarding ventilated storage areas can be found in Attachment 12.

1.7.~~8~~**9** Toxic Maintenance Facility

The TMF building is located at the north end of the CAMDS site. It is constructed with a reinforced concrete floor, steel panel walls, and roof. The TMF stores solid and liquid hazardous waste.

1.7.~~9~~**10** Ventilated Storage Area

The VSA is located immediately south of the ATF in the southeast corner of the CAMDS facility. It provides ventilated storage for waste items that have been generated from testing and processing of agent wastes. Examples of the types of wastes stored in the VSA are agent processing wastes, spent carbon and non-carbon filters, and potentially contaminated PPE items, liquid and solid laboratory wastes, and maintenance residues.

The waste items will be stored in the contaminated area of the VSA, prior to final treatment or disposal. The VSA also houses the Material Decontamination Chamber 2, unit B (MDC 2, unit B). More detailed information regarding ventilated storage areas can be found in Attachment 12.

~~1.7.10 Auxiliary Test Facility / Residual Storage Facility~~

~~The ATF/RSF building is located at the south end of the CAMDS site. It is constructed with a reinforced concrete floor, steel panel walls, and roof. The ATF/RSF will store solid and liquid hazardous waste.~~

1.7.11 General Purpose Facility

The GPF is located immediately north of the ATF in the southeast corner of the CAMDS facility. It provides ventilated storage for waste items that have been generated from testing and processing of agent wastes. Examples of the types of wastes stored in the GPF are agent processing wastes, spent carbon and non carbon filters, potentially contaminated PPE items, liquid and solid laboratory wastes, and maintenance residues. The waste items will be stored in the containment area of the GPF, prior to final treatment or disposal. More detailed information regarding ventilated storage areas can be found in Attachment 12.

1.7.12 Multipurpose Demilitarization Machine Processing Area and Conveyor Gallery (MDMCG)

The MDM/CG is located in the East End of the Multipurpose Demilitarization Facility (MDF), which is located north of and contiguous to the Metal Parts Furnace (MPF) building. The MDM Processing Area is a toxic enclosure in the Multipurpose Demilitarization Facility (MDF). It is constructed of reinforced concrete floors, steel wall panels, and roof. The MDM/CG will be used to store containerized liquid waste.

1.7.13 Multipurpose Demilitarization Facility (MDF) Toxic Unpack Area (MDF Toxic UPA)

The MDM Toxic UPA is located in the East End of the MDF, which is located north and contiguous to the MPF Building. The MPF Toxic Unpack is a toxic enclosure in the MDF. It is constructed of reinforced concrete floors, steel wall panels, and roof. The MDF Toxic Unpack Area will be used to store containerized liquid waste.

1.7.14 Bulk Item Facility Drain Bay (BIF)

The BIF is located on the East End of the MDF, which is located north of and contiguous to the MPF Building. The MDM Processing Area is a toxic enclosure in the MDF. It is constructed of reinforced concrete floors, steel wall panels, and roof. The BIF will be used to store containerized liquid waste.

1.7.15 MDF/BIF Airlock

The MDF/BIF Airlock is located in the West End of the MDF, which is located north of and contiguous to the MPF Building. The MDF/BIF Airlock is a toxic enclosure in the

MDF. It is constructed of reinforced concrete floors, steel wall panels, and roof. The MDF/BIF Airlock will be used to store containerized liquid wastes.

1.7.16 MDF/BIF Loading Area

The MDF/BIF Loading Area is located in the West End of the MDF, which is located north of and contiguous to the MPF Building. The MDF/BIF Loading Area is an enclosed, non-ventilated area in the MDF. It is constructed of reinforced concrete floors, steel wall panels, and roof. The MDF/BIF Loading Area will be used to store containerized liquid wastes.

1.7.17 Building 4104

Building 4104 is used to store wastes generated from the operation and maintenance of the facilities at DCD. The building is also used to store components of process equipment that are removed from CAMDS, but will be used again. All items (wastes and stored equipment) stored in Building 4104 have a minimum decontamination designation of 3X. Solid and liquid wastes are stored at this location.

1.7.18 Building 4105

Building 4105 is identical in design to Building 4104 and is also used to store wastes generated from the operation and maintenance of the facilities at DCD. All items (wastes and stored equipment) stored in this building have a minimum decontamination designation of 3X. Only hazardous wastes that do not contain free liquids are stored in Building 4105.

1.8 Tank Storage Areas

Hazardous wastes received and generated at CAMDS in support of test plans and projects are stored in the agent tanks listed below. These storage tanks have been constructed to meet all environmental tank standards. Storage of waste is maintained at levels consistent with the test projects in progress at any time. As a project is completed, the wastes are collected and packaged appropriately, for proper storage and disposal.

There are several hazardous waste tank systems necessary for CAMDS. These systems vary and consist of any or all of the following: tanks, sumps, pumps, and other ancillary equipment. There are tank systems to collect agent, other liquid wastes, and laboratory wastes. A presentation of specific information pertaining to CAMDS tank systems is provided in Attachment 13.

Hazardous wastes stored in tanks at CAMDS are stored in the following tanks.

1.8.1 Agent Tanks:

- ~~Segregation Area - Tank 1~~
- ~~Segregation Area - Tank 2~~
- Multipurpose Demilitarization Facility - Tank 3
- Multipurpose Demilitarization Facility - Tank 4
- ~~Liquid Incinerator Room - Tank 5~~

Sections that are not permanently or semi-permanently sealed will be monitored at least once per year (or more frequently, if requested by the Regional Administrator) in accordance with EPA Method 21.

Sections of the ventilation system that operate at a pressure below atmospheric will be visually inspected for defects that could lead to air emissions (look for visible cracks, holes, or gaps in ductwork or piping, or loose connections). An initial inspection will be performed on or before the system becomes subject to Subpart CC. Thereafter, an inspection will be performed at least once each year.

Repairs of Defects noted in inspections: for emissions detected visually or by instrument readings of greater than 500 ppmv VOCs above background, repairs will be made within 15 calendar days, and the first attempt at repair will be made no later than 5 days from when the emissions were detected. Such repairs may be delayed only if the following conditions exist: if the repair is not technically feasible without a process unit shutdown, or if the owner/operator determines that emissions resulting from immediate repair would be greater than that resulting from delaying the repairs.

5.1.3 Inspections of Sub Part X Units

~~5.1.3.1 Brine Dryer Inspection~~

~~The brine dryers are inspected each operating day. The pumps are checked for evidence of obvious mechanical failure, excessive noise, and vibration. Piping, valves, and connections are visually inspected for evidence of corrosion and leakage. The Brine Dryer structure and supports are checked for evidence of corrosion. The brine dryer salt conveyor housings are inspected to assure they are free of waste residue buildup. The dryer area is visually inspected for evidence of leakage, cracks, spills or overflow, and chips or gouges that would allow seepage into construction materials or ground. The secondary containment system is examined for evidence of cracks, erosion of construction materials, or other physical damage. Overfill/spill control equipment is inspected for evidence of corrosion, leakage, or other physical damage. Leaks and spills are noted on inspection logs. Equipment leaks and spills in brine dryer area and brine dryer secondary containment area are cleaned up or corrective action will be initiated within 24 hours of the time the leak or spill is noted on the daily inspection log. If corrective action cannot be initiated within 24 hours, written justification is added to the inspection log. If it becomes necessary to add decontaminants to the content of the tanks in the brine dryer area, due to detection of agent, this will be recorded in the operating record. Each day the operating record will be inspected to make sure that contaminated brines are not treated in the brine dryer.~~

~~5.1.3.2 Brine Evaporator Inspection~~

~~The brine evaporator is inspected daily when in operation. The tank structure is inspected for evidence of corrosion, erosion, leaking seams, or fixtures. The evaporator area is checked for evidence of leakage, cracks, chips or gouges that would allow seepage into construction materials or ground. The piping and valves are inspected for evidence of corrosion and leakage. The pumps and pump connections are checked for excessive noise and vibration and evidence of obvious mechanical failure. The brine evaporator supports~~

~~are checked for evidence of corrosion. The secondary containment system is inspected for evidence of cracks, erosion of construction materials, or other physical damage. The overfill/spill control equipment is inspected for evidence of corrosion, leakage, or other physical damage. When in operation the test button on the control panel is depressed to verify that available horn functions, gauges are operable, and test lights illuminate.~~

5.1.3.~~3~~**1** Material Decontamination Chamber Inspection

The Material Decontamination Chambers (MDC2), units A and B, and associated equipment are visually inspected daily (when in operation) for proper ventilation system operation and area chemical agent monitoring. The temperature gauges and controls are also inspected to ensure that the proper temperatures and airflows are maintained during operation. The air filter and pressure system, chamber, and access door are visually inspected for signs of physical damage, wear, or deterioration that could compromise the chamber integrity. The recirculation fan is checked for excessive noise or vibration.

~~5.1.3.4 Rocket Shear Machine Inspection~~

~~The Rocket Shear Machine (RSM) and associated equipment are visually inspected daily (when in operation) for proper ventilation system operation and area chemical agent monitoring. During operation, the RSM is viewed by the Control Module Operators (CMO) via CCTV and data is presented on control room screens to monitor processing of rockets. The CMO also looks for signs of obvious physical damage, wear, or deterioration of the equipment. The hydraulic and pneumatic systems are inspected to ensure that proper pressures are maintained during operation.~~

5.1.3.~~5~~**2** Multipurpose Demilitarization Machine Inspection

The Multipurpose Demilitarization Machine (MDM) and associated equipment are visually inspected daily (when in operation) for proper ventilation system operation and area chemical agent monitoring. During operation, the MDM is viewed by the CMO via CCTV and data is presented on control room screens to monitor processing of munitions. Direct observation through the MDM control room window adjacent to the MDM is also used to monitor processing of munitions. The CMO or MDM room observer(s) also looks for signs of obvious physical damage, wear, or deterioration of the equipment. The hydraulic and pneumatic systems are inspected to ensure that proper pressures are maintained during operation.

5.1.3.~~6~~**3** Projectile/Mortar Disassembly Machine Inspection

The Projectile/Mortar Disassembly Machine (PMD) and associated equipment are visually inspected daily (when in operation) for proper ventilation system operation and area chemical agent monitoring. During operation, the PMD is viewed by the CMO via CCTV and data is presented on control room screens to monitor processing of munitions. The CMO or the PMD room observer(s) also looks for signs of obvious physical damage, wear, or deterioration of the equipment. The hydraulic and pneumatic systems are inspected to ensure that proper pressures are maintained during operation.

5.1.3.~~7~~**4** Bulk Drain Station Inspection

The Bulk Drain Station (BDS) and associated equipment are visually inspected daily (when in operation) for proper ventilation system operation and area chemical agent monitoring. During operation, the BDS is viewed by the CMO via CCTV and data is presented on control room screens to monitor processing of munitions. Direct observation through the MDM control room window adjacent to the BDS is also used to monitor processing of bulk items. The CMO or the MDM room observer(s) also looks for signs of obvious physical damage, wear, or deterioration of the equipment. The hydraulic and pneumatic systems are inspected to ensure that proper pressures are maintained during operation.

5.1.3.~~8~~5 Rocket Separation Machine Inspection

The Rocket Separation Machine (APE 1240) and associated equipment are visually inspected daily (when in operation) for proper ventilation system operation and area chemical agent monitoring. During operation, the APE 1240 is viewed by the CMO via CCTV and data is presented on control room screens to monitor processing of munitions. The CMO or the APE 1240 room observer(s) also looks for signs of obvious physical damage, wear, or deterioration of the equipment. The hydraulic and pneumatic systems are inspected to ensure that proper pressures are maintained during operation.

~~5.1.3.9 Instrumented Ton Containers (ITCs)~~

~~The Instrumented Ton Containers (ITCs) and the associated equipment are visually inspected daily, when in operation for proper ventilation system operation and chemical agent monitoring. During operation, the ITCs are viewed by the CMO via CCTV and data is presented on control room screens to monitor processing of agent. Direct observation through the BIF control room window adjacent to the BIF Agent Drain Bay is also used to monitor treatment in ITCs. The CMO or the BIF Control Room observer(s) also look for signs of obvious physical damage, wear, or deterioration of the equipment. The pneumatic systems, and agent transfer systems are inspected to ensure that proper pressures are maintained during operation. Any conditions for compliance with Organic Air Emissions requirements will be verified by inspection.~~

5.1.4 Remedial Action

If inspections show that non-emergency maintenance is needed, it will be completed expeditiously to prevent damage and obviate the need for emergency response. If it is found during an inspection (or between inspections) that a hazard is imminent or has already occurred, remedial action measures will be undertaken immediately. A detailed description of remedial action measures and notification procedures for incidents involving hazardous waste release is provided in Attachment 9.

5.1.5 Inspection Log

Inspection logs specific to each category listed in Table 5-1 are kept at the facility. The logs are the written record of the items inspected, frequency of inspection, and types of problems for which items are inspected as contained in the inspection schedule outlined in Table 5-1.

Table 5-1 INSPECTION SCHEDULE		
Item **264.15(b)(1)**	**Frequency[a]** **264.15(b)(4)**	**Types of Problems** **264.15(b)(3)**
SATELLITE and 90 DAY ACCUMULATION AREAS		
Containers	Initially and W	Visually inspect for leaking containers and cracks, gaps, or open spaces in covers, deterioration of containers, rust, corrosion, or trends that indicate a possible problem. Check accumulation start dates (90-day areas only) and container labeling. Check for adequate aisle space and that satellite containers are labeled as waste and under operator control.
Containment Systems (90 Day Accumulation areas only)	W	Inspect floor and curbing of the storage area or containment system for cracks, flaking, chips or gouges, and for areas that may indicate excessive wear or deterioration. Examine floor surface for evidence of contamination.
METAL PARTS FURNACE AND LIQUID INCINERATOR POLLUTION ABATEMENT SYSTEM		
Quench pump	D when in operation	Visually inspect for leaks. Check for excessive noise and vibration.
Induced draft fan	D	Check for excessive noise and vibration.
Pollution abatement system	D	Visually inspect for leaks, spills, fugitive emissions, and signs of tampering.
CHEMICAL AGENT STORAGE TANKS (~~ECC SEC,~~LIC, MDM)		
Tank area	D	Visually inspect for evidence of leakage, cracks, chips or gouges that would allow seepage into construction materials or ground.
Piping and valves	D	Visually inspect for evidence of corrosion and leakage.
Tank structure	D	Visually inspect for evidence of corrosion, erosion, leaking seams or fixtures.
Pumps	D when in operation	Visually inspect connections for evidence of obvious mechanical failure. Check for excessive noise and vibration.
Tank supports	D	Visually inspect for evidence of corrosion.
Secondary containment system and containment sumps	D	Visually inspect for evidence of cracks, erosion of construction materials or other physical damage.
Level sensors	D	Check for proper operation at monitor panel in CMO.
Overfill/spill control equipment	D	Visually inspect for evidence of corrosion, leakage or other physical damage.
Tank Roofs and Closure Devices (headspace pressure below atmospheric)	Y	Inspect visually for defects (cracks, holes, gaps, broken or damaged seals or gaskets, broken or missing hatches, access covers, etc.) that could lead to air emissions.

Table 5-1
INSPECTION SCHEDULE

Item 264.15(b)(1)	Frequency[a] 264.15(b)(4)	Types of Problems 264.15(b)(3)
Area chemical agent monitors	D	Visually inspect to ensure required monitors are present and operational.
	D	Check for agent challenge.
All Hazardous Waste Sumps (BDA, BIF, ECC SEG, ETF, LAB 541, MDF, MPF, RSA, CDS, VSA, GPF, **CTF**, ~~ATF/RSF,~~ CAMDS Lab, SMF, MTF & TMF, etc.) *Sumps are inspected weekly when systems are not in operation		
Sump structure	D*	Visually inspect for evidence of corrosion, erosion, leaking seams or fixtures, and presence of waste when not in operation
Piping and valves	D*	Visually inspect for evidence of corrosion and leakage.
Pumps	D*	Visually inspect for evidence of obvious mechanical failure. Check for excessive noise and vibration.
Secondary containment system and containment sumps	D*	Visually inspect for evidence of cracks, erosion of construction materials or other physical damage.
Level/moisture sensors	D*	Check for proper operation at monitor panel in CMO.
Overfill/spill control equipment	D*	Visually inspect for evidence of corrosion, leakage or other physical damage.
Sump integrity for sumps without secondary containment	A	Perform integrity assessment to confirm sump integrity.
EMERGENCY GENERATORS		
Engine generator	M	Start unit with uninterruptable power supplies or air as required. Check governor speed. Check voltage output regularity. Check for any unusual noise. Check electrical phase output balance.
COMMUNICATION		
Control room alarm panels in CMO	D	Check integrity of audible/visual alarm.
Radio (Demilitarization Protective Ensemble)	W	Check for proper operation and audibility.
Radio (Security)	W	Check for proper operation and audibility.
Telephones	W	Check for proper operation and audibility. (Emergency telephone and telephones used for Demilitarization Protective Ensemble entries)
Public address	W	Check for proper operation and audibility.
Closed-circuit television	W	Check for visual clarity, tilt, pan and zoom function.
SECURITY		
Gates	D	Operate Sallyport vehicle and personnel gate interlock override to assure capability for emergency ingress/egress.
Locks	D	Check locks on all unused gates and buildings.
Fence	D	Check for integrity, intrusion or obstruction by vegetation, and gaps at fence base.
Lighting	D	Check for proper functioning and assurance that lighted areas are not masked by vegetation.

Table 5-1

INSPECTION SCHEDULE

Item 264.15(b)(1)	Frequency[a] 264.15(b)(4)	Types of Problems 264.15(b)(3)
FIRE PROTECTION SERVICES		
Alarms (Building pull box)	S	Check for operability.
Extinguishers (Hand Held)	M	Check for condition and gauge pressure.
Fire suppression system for control room	M	Visually check for proper pressure.
Smoke detectors	S	Check for operability.
2 1/2" Drain Test	Q	System check for transmitter operability and flow detection.
Wet and dry sprinkler systems	A	Check for operability with trip tests.
Fire hydrants	A	Check for water distribution flow.
DEMILITARIZATION PROTECTIVE ENSEMBLE		
Outer garment, outer gloves and boots	D	Ensure that a quantity of ten (10) DPE outer garments, outer gloves and boots are on hand for operation requiring DPE. Inspect garments that are to be worn to ensure that they have been properly hung and aired out.
DPE leak detector	D	Inspect operator's log to ensure that check with Snoop Test has been performed on entries.
Respirator and self contained breathing apparatus (SCBA)	D	Ensure that emergency air bottles in DPE support area are filled.
Butyl rubber storage	S	Ensure that there is sufficient inventory and that expiration dates have not lapsed (where applicable).
EMERGENCY EQUIPMENT		
Ambulance	W (when vehicle present at site)	Verify that information on inspection form allows for normal vehicle start-up and operation when the ambulance is located at the CAMDS site.
EMERGENCY EQUIPMENT		Inspections of the equipment listed below are carried out in accordance with the DCD Part B Storage Permit.
Spill control vehicle	W	Make sure vehicle is parked at proper location; starts and runs properly; key is left in ignition; gas tank is more than one-half full; and it has sufficient inventory of items.
Power-driven decontamination apparatus	W	Make sure vehicle is parked at proper location; starts and runs properly; key is left in ignition; gas tank is more than one-half full; and it has decontaminant properly stored.
~~**BRINE DRYERS (Subpart X Units)**~~		
~~Dryer area~~	~~D~~	~~Visually inspect for evidence of leakage, cracks, chips or gouges that would allow seepage into construction materials or ground.~~
~~Piping and valves~~	~~D~~	~~Visually inspect for evidence of corrosion and leakage.~~
~~Pumps~~	~~D~~	~~Visually inspect connections for evidence of obvious mechanical failure. Check for excessive noise and vibration.~~
~~Brine Dryer structure and supports~~	~~D~~	~~Visually inspect for evidence of corrosion.~~

Table 5-1
INSPECTION SCHEDULE

Item 264.15(b)(1)	Frequency[a] 264.15(b)(4)	Types of Problems 264.15(b)(3)
~~Secondary containment system~~	~~D~~	~~Visually inspect for evidence of cracks, erosion of construction materials or other physical damage.~~
~~Overfill/spill control equipment~~	~~D~~	~~Visually inspect for evidence of corrosion, leakage or other physical damage.~~
~~Brine Dryer~~	~~D~~	~~Check area for spills or overflow.~~
~~Salt conveyor housing~~	~~D~~	~~Check for waste residue build up.~~
~~**BRINE EVAPORATOR (Subpart X Unit)**~~		
~~Tank structure~~	~~D~~	~~Visually inspect for evidence of corrosion, erosion, leaking seams or fixtures.~~
~~Evaporator area~~	~~D~~	~~Visually inspect for evidence of leakage, cracks, chips or gouges that would allow seepage into construction materials or ground.~~
~~Piping and valves~~	~~D~~	~~Visually inspect for evidence of corrosion and leakage.~~
~~Pumps~~	~~D~~	~~Visually inspect connections for evidence of obvious mechanical failure. Check for excessive noise and vibration.~~
~~Brine Evaporator supports~~	~~D~~	~~Visually inspect for evidence of corrosion.~~
~~Secondary containment system~~	~~D~~	~~Visually inspect for evidence of cracks, erosion of construction materials or other physical damage.~~
~~Overfill/spill control equipment~~	~~D~~	~~Visually inspect for evidence of corrosion, leakage or other physical damage.~~
~~Evaporator test panel and gauges~~	~~D when in operation~~	~~Depress test button on panel. Verify that available horn functions and test lights illuminate.~~
MATERIAL DECONTAMINATION CHAMBERS (Subpart X Units)		
Control Panel	D	Visually inspect to ensure that temperature and air flow guages are operational.
Area chemical agent monitors	D	Visually inspect to ensure required monitors are present and operational.
	D	Check for agent challenge
Chamber	D	Visually inspect for signs of physical damage, wear, or deterioration.
Access door	D	Visually inspect for signs of physical damage, wear, or deterioration.
Recirculation fan	D	Check for excessive noise of vibrations.
~~**ROCKET SHEAR MACHINE (Subpart X Unit)**~~		
~~Area chemical agent monitors~~	~~D~~	~~Visually inspect to ensure required monitors are present and operational.~~
	~~D~~	~~Check for agent challenge.~~
~~Hydraulic and pneumatic systems~~	~~D~~	~~Visually inspect to ensure the system does not show excessive wear and will maintain proper pressures during operation.~~

Table 5-1

INSPECTION SCHEDULE

Item 264.15(b)(1)	Frequency[a] 264.15(b)(4)	Types of Problems 264.15(b)(3)
~~Equipment operation~~	~~D~~	~~Check data from control room screens for indications of proper equipment operation.~~
	~~D~~	~~Visually observe rocket processing to ensure proper operation from the CMO.~~
	~~D~~	~~Visually inspect from CMO for obvious signs of physical damage, wear, or deterioration of the equipment.~~
MULTIPURPOSE DEMILITARIZATION MACHINE (Subpart X Unit)		
Area chemical agent monitors	D	Visually inspect to ensure required monitors are present and operational.
	D	Check for agent challenge.
Hydraulic and pneumatic systems	D	Visually inspect to ensure the system does not show excessive wear and will maintain proper pressures during operation.
Equipment operation	D	Check data from control room screens for indications of proper equipment operation
	D	Visually observe processing to ensure proper operation from the CMO or MDM control room
	D	Visually inspect from CMO or MDM control room for obvious signs of physical damage, wear, or deterioration of the equipment.
PROJECTILE/MORTAR DISASSEMBLY MACHINE (Subpart X Unit)		
Area chemical agent monitors	D	Visually inspect to ensure required monitors are present and operational.
	D	Check for agent challenge.
Hydraulic and pneumatic systems	D	Visually inspect to ensure the system does not show excessive wear and will maintain proper pressures during operation.
Equipment operation	D	Check data from control room screens for indications of proper equipment operation
	D	Visually observe processing to ensure proper operation from the CMO
	D	Visually inspect from CMO for obvious signs of physical damage, wear, or deterioration of the equipment.
ROCKET SEPARATION MACHINE (Subpart X Unit)		
Area chemical agent monitors	D	Visually inspect to ensure required monitors are present and operational.
	D	Check for agent challenge.
Hydraulic and pneumatic systems	D	Visually inspect to ensure the system does not show excessive wear and will maintain proper pressure during operation.

Table 5-1
INSPECTION SCHEDULE

Item 264.15(b)(1)	Frequency[a] 264.15(b)(4)	Types of Problems 264.15(b)(3)
Equipment Operation	D	Check for data from control room screens for indications of proper equipment operation
	D	Visually observe processing to ensure proper operation from the CMO
	D	Visually inspect from CMO for obvious signs of physical damage, wear, or deterioration of the equipment.
BULK DRAIN STATION (Subpart X Unit)		
Area chemical agent monitors	D	Visually inspect to ensure required monitors are present and operational.
	D	Check for agent challenge.
Hydraulic and pneumatic systems	D	Visually inspect to ensure the system does not show excessive wear and will maintain proper pressures during operation.
	D	Check data from control room screens for indications of proper equipment operation
	D	Visually observe processing to ensure proper operation from the CMO or MDM control room
Equipment operation	D	Visually inspect from CMO or MDM control room for obvious signs of physical damage, wear, or deterioration of the equipment.
~~INSTRUMENTED TON CONTAINERS ITCs (Subpart X Units)~~		
~~Area chemical agent monitors~~	~~DW~~	~~Visually inspect to ensure required monitors are present and operational.~~
	~~DW~~	~~Check for agent challenge.~~
~~Agent Transfer System~~	~~DW~~	~~Check for signs of leakage from equipment (valves, connectors, pressure relief devices, etc.)~~
~~Equipment Operation~~	~~DW~~	~~Visually inspect from CMO or BIF control room for obvious signs of physical damage, wear, or deterioration of the equipment~~
~~Compliance with Organic Emission Control Requirements (Subpart CC)~~	~~DW~~	~~Check for distance of VOC emitting points from natural draft openings in enclosure (BIF agent drain bay room)~~

Notes:

a D-Daily, DW-Daily when operating and weekly when not in operation, W-Weekly, M-Monthly, Q-Quarterly, S-Semiannually, A-Annually

Table 10-2 lists all permitted storage tanks and capacities. Table 10-3 lists the storage areas and capacities.

TABLE 10-2
PERMITTED STORAGE/TREATMENT TANKS

Tank Description	Location	Capacity (gal.)
Agent Tanks:		
Rocket Shear Line Area, Tank 1 (SEG-T1)	ECC/Segregator	300
Rocket Shear Line Area, Tank 2 (SEG-T2)	ECC/Segregator	300
Multipurpose Demilitarization Machines Area, Tank 3, (MDF-T3)	MDM	300
Multipurpose Demilitarization Machines Area, Tank 4, (MDF-T4)	MDM	300
Liquid Incinerator Room, Tank 5, (LIC-T5)	LIC Primary Chamber	300
Agent Storage Room, Tank 6, (ASR-T6)	LIC Agent Tank Room	300
Agent Storage Room, Tank 7, (ASR-T7)	LIC Agent Tank Room	500
Brine Drying Area Brine Holding Tanks:		
Tank T13-A	BDA	5,000
Tank T13-B	BDA	5,000
Tank T13-C	BDA	5,000
Tank T13-D	BDA	15,000
Tank T13-E	BDA	15,000
Toxic Maintenance Facility Waste Liquid Storage Tanks:		
Tank TMF-1	TMF	1,600
Tank TMF-2	TMF	1,600

Table 10-3
Container Storage & Waste Piles - Maximum Waste Inventory

Container Storage HWMU	Maximum Inventory
Building 4104	23,760 gallons
Building 4105	83,600 gallons
ETF	40,260 gallons
MHA	4,040 gallons
MPF	17,160 gallons
RSA	6,600 gallons
SEG/ECC #1	5,280 gallons
MTF	4,400 gallons
TMF	6,600 gallons
VSA	13,770 gallons
ATF	33,000 gallons
GPF	35,860 gallons
CTF	**43,560 gallons**
MDM/CG	1,700 gallons
MDF Toxic UPA	680 gallons
MPF Charge Car Room	170 gallons
BIF Drain Bay	680 gallons
MDF/BIF Airlock	680 gallons
MDF/BIF Loading Area	1,700 gallons
Note: The quantities presented above are the total volumes of container storage and waste piles (if any) combined.	

CAMDS operates HWMUs for treatment, bulk storage, and container storage. Also, the site has several Subpart X facilities and other miscellaneous facilities that will require closure. These HWMUs are:

Treatment Units:

- Deactivation Furnace System (DFS)
- Liquid Incinerator (LIC)
- Metal Parts Furnace (MPF)

Bulk Storage Areas (Table 10-2 has additional information on tank storage units):

- Agent Tanks
- Brine Drying Area Holding Tanks (BDA Tanks)
- Toxic Maintenance Facility Tanks (TMF Tanks)

Container Storage Areas (Table 10-3 has additional information on container areas):

- Auxiliary Test Facility (ATF)
- Building 4104
- Building 4105
- Equipment Test Facility (ETF) Area
- Munitions Holding Area (MHA)
- Metal Parts Furnace (MPF) Area
- Residual Storage Area (RSA)
- Segregator/Explosives Containment #1 (SEG/ECC #1)
- Material Treatment Facility (MTF)
- Toxic Maintenance Facility (TMF)
- Ventilated Storage Areas (VSA)
- General Purpose Facility (GPF)
- **Chemical Test Facility (CTF)**
- Multipurpose Demilitarization Machine Processing Area and Conveyor Gallery (MDM/CG)
- Metal Parts Furnace (MPF) Charge Car Room
- Multipurpose Demilitarization Facility (MDF) Toxic Unpack Area (MDF Toxic UPA)
- Bulk Item Facility Drain Bay (BIF)
- MDF/BIF Airlock
- MDF/BIF Loading Area

Subpart X Units and Other Miscellaneous Areas:

- Brine Dryers
- Brine Evaporator
- Bulk Drain Station
- Heated Discharge Conveyor (HDC)
- Multipurpose Demil Machine (MDM)
- Projectile/Mortar Disassembly (PMD)
- Rocket Sheer Machine (RSM)

The sampling plan will be developed using the criteria in this document. The interior of the incinerators will not be sampled.

The DFS will be sampled for agent, explosives, propellants and PCBs. Other analysis may be performed depending on the operating record. The BIF and associated sump will be closed with the MPF.

Table 10-8
SUMMARY OF ESTIMATED CLOSURE SAMPLING REQUIRED

		Air	Core[1]	Liquid Wastes		Soil[2]	Chip[3]	Wipe
				SDS	Rinsate[1]			
1	**Incinerators**							
	Deactivation Furnace System	X	3	3	2	2	9	3
	Liquid Incinerator	X	6	3	2	-	8	3
	Metal Parts Furnace	X	7	3	6	2	31	3
2	**Bulk Storage**							
	Agent Tanks	X	6	1[4]	7[5]	-	3	14
	Brine Drying Area Holding Tanks	X	6	1	5	-	3	10
	Toxic Maintenance Facility Tanks	X	6	1	2	-	3	4
3	**Containerized Storage Areas**							
	Auxiliary Test Facility	X	-	3	2	-	4	1
	Building 4104	-	-	-	1	-	4	-
	Building 4105	-	-	-	5	-	20	-
	Equipment Test Facility (ETF)	X	5	3	3	2	9	1
	Munitions Holding Area (MHA)	X	1	3	3	2	9	1
	Metal Parts Furnace (MPF) Area	-	2	-	12	-	5	11
	Residual Storage Area (RSA)	X	2	3	2	-	5	1
	Material Treatment Facility (MTF)	X	2	3	2	-	5	1
	Ventilated Storage Area (VSA)	X	2	3	2	-	5	1
	General Purpose Facility (GPF)	X	2	3	2	-	5	1
	Chemical Test Facility (CTF)	**X**	**2**	**3**	**2**	**-**	**5**	**1**
	Segr/Expl. Cont. #1 (SEG/ECC#1)	X	2	3	3	-	5	2
	Toxic Maintenance Facility (TMF)	X	2	3	5	-	5	4
4	**Subpart X**							
	Brine Drying Area (BDA)	-	6	-	24	-	15	21
	Brine Drum Dryer	-	-	-	3	-	-	3
	Brine Evaporator Dryer	-	-	-	3	-	-	3
	MDF	X	8	3	9	-	13	6
	Bulk Drain Station	X	-	-	1	-	-	-
	MDM	X	-	-	1	-	-	-
	PMD	X	-	-	1	-	-	2
	HDC	-	-	-	5	-	DFS	2
	RSM	X	-	3	4	-	DFS	3
	MDC 2 units A and B	X	-	3	2	-	4	1
5	**SAF Sump**	-	**2**	-	**1**	**1**	**1**	-

Notes:
1 Core samples are from the sumps and from the loading areas of the DFS, MPF, MHA, and ETF.
2 The rinsate samples are from washing the floor and from rinsing the equipment.
3 The chip samples are from the sumps and floors.
4 The waste in the tanks is agitated and one sample pulled prior to disposal. Each time a batch is sent to the incinerator, a sample is collected.
5 One-rinse sample will be taken from each tank.
5 The agent tanks are located in the SEG/ECC#1, MDF, and the LIC.

10.16.8.2 Bulk Storage Areas

Spent decontamination solution will be agitated in the tank and sampled prior to disposal. One sample will be collected for each batch of waste sent to the incinerator or containerized and solidified for disposal off-site. Tanks will be sampled for agent, agent breakdown products and other hazardous constituents. The tanks will be monitored with NRT monitors or DAAMS. The location and number of wipe samples taken from each tank will be outlined in updated closure plans that will be submitted for approval by the Executive Secretary before closure. The sumps will be sampled using the process described in the Sump section above. The equipment, floors and structure will be decontaminated as described in Section 10.5.

Secondary containment systems will be decontaminated and rinsed. After washing is completed, chip samples of the floor surface will be obtained. At least three samples will be taken from the floor of each vault or liner system surrounding each tank system. Additional samples will be collected as needed. These samples will be analyzed for hazardous materials as determined from reviewing the operating record. If sample results are above hazardous waste levels, the floors and/or sumps that are not clean will be washed again until a clean sample is obtained. The area immediately surrounding the tank system will be sampled in a random pattern between 1 and 5 feet outside the walls of the vaults or liners surrounding the tanks.

10.16.8.3 Permitted Container Storage Areas

All storage areas will have chip samples collected from the floors and sumps as described in the chip sampling section. Wipe samples will be taken from the equipment used in the areas. Facilities used to store chemical agent will be monitored using NRT monitors and DAAMS. These facilities are the ATF, MHA, RSA, VSA, **GPF, CTF,** SEG/ECC#1, ETF, MTF, MDM/CG, MPF Charge Car Room, MDF Toxic UPA, BIF Agent Drain Bay, MDF/BIF Airlock, MDF/BIF Unloading Area, and the TMF. Facilities that are not used to store chemical agent are Building 4104, Building 4105, and MPF.

The SEG/ECC#1 and the ETF will be sampled for explosives. The apron and soil around the loading docks at the MHA will be sampled as described above.

10.16.8.4 Subpart X

MDM, the Bulk Drain Station, MDC2 units A and B, and the RSM will be decontaminated. The spent decontamination solution from these operations will be sampled. The area will also be monitored by NRT monitors or DAAMS. Rinse water from cleaning the equipment will be sampled and analyzed.

Subpart X equipment is located near other HWMUs, such as the DFS and MPF. The decontamination of floors and other equipment where this equipment is used will be addressed in the facility closures. The Brine Drying Area has various types of equipment that will be rinsed and sampled.

10.16.9 CAMDS Site Sampling

Drawing Number	Drawing Title	Rev No.	Rev. Date
TCDS 39-700-02 Sheet 1 of 1	**CTF Process Area and Control Room Floor Plans**		**8/11/99**
TCDS 39-705-05 Sheet 1 of 1	**CTF General Area Foundation Plan**	**A**	**3/09/04**
TCDS 42-700-01 Sheet 1 of 6	MHA Igloo for Chemical Storage Layout, Structural and Elevation	D	11/23/04
TCDS 44-202-01 Sheet 1 of 1	MTF Permitted Storage Areas Layout	A	8/13/02
TCDS 53-200-04 Sheet 1 of 2	ETF Toxic and Hazardous Storage North End Plan		9/14/05
TCDS 53-200-04 Sheet 2 of 2	ETF Toxic and Hazardous Storage South End Plan		9/14/05
TCDS 57-203-01 Sheet 1 of 2	HW Storage Area Permitted/90 Day/ Satellite/Spill Kit Site Layout	E	7/23/02
TCDS 87-701-04 Sheet 1 of 1	VSA Secondary Containment Plan	C	2/11/04
TCDS 89-700-01 Sheet 1 of 1	GPF Floor Plan Layout	A	1/24/05
TCDS 99-703-06 Sheet 1 of 1	Building 4104 Hazardous. Waste Storage Locations Safety Equipment Layout	A	8/13/02
	Tanks and Sumps (Attachment 13)		
TCDS 05-353-05 Sheet 1 of 1	Metal Parts Furnace Retention Tanks D-601, D-602 Details	E	4/15/04
TCDS 11-200-01 Sheet 1 of 1	Waste Liquid Systems Pipeline Routes Schematic	G	3/18/04
TCDS 13-301-01 Sheet 1 of 2	Brine Holding Tank T-13A, T-13B, T-13C Details	B	3/23/99
TCDS 13-301-01 Sheet 2 of 2	Brine Holding Tank T-13A, T13B, T13C Top of Tank Details		3/23/99
TCDS 13-301-02 Sheet 1 of 1	BDA Level Gauge - Tanks T-13A, B &C Assembly	F	8/01/05
TCDS 13-301-09 Sheet 1 of 2	BDA Brine Holding Tank T-13D, T-13E Weldment	C	3/09/99
TCDS 17-110-01 Sheet 1 of 1	SEG Agent Collection and Transfer System Flow Diagram	E	7/11/00
TCDS 17-310-04 Sheet 1 of 1	RLS/LIC Chemical Agent Collection Tank Assembly and Details	E	3/06/98
TCDS 17-320-03 Sheet 1 of 2	MDF Chemical Agent Collection Tank Assembly and Details	D	3/09/98
TCDS 17-320-03 Sheet 2 of 2	MDF Chemical Agent Collection Tank Assembly and Details	B	3/06/98
TCDS 17-330-03 Sheet 1 of 1	LIC 500 Gallon Collection Tank Assembly and Details	B	3/09/98
TCDS 17-600-03 Sheet 1 of 1	MDF Agent Piping Ventilation System Isometric and Details	F	3/10/98

Drawing Number	Drawing Title	Rev No.	Rev. Date
TCDS 17-610-01 Sheet 1 of 1	UPA Ton Container Agent Fill Line Assembly	B	3/17/98
TCDS 17-610-03 Sheet 1 of 2	Rocket Line System Agent Collection and Transfer System Isometric and Parts List	N	3/16/98
TCDS 17-620-01 Sheet 1 of 4	MDF/BIF Agent Collection and Transfer System Isometric and Details	J	8/30/01
TCDS 17-620-01 Sheet 3 of 4	MDF/BIF Agent Transfer System Isometric and Details	L	3/17/98
TCDS 17-620-01 Sheet 4 of 4	MDF/BIF Agent Collection and Transfer System Isometric and Details	J	11/23/05
TCDS 17-621-01 Sheet 1 of 2	MDF/BIF Agent Collection and Transfer System Isometric and Details	B	2/25/03
TCDS 17-630-01 Sheet 1 of 1	Agent Tank Room Agent Piping Plan and Sections	E	4/09/98
TCDS 39-705-04 Sheet 1 of 1	**CTF Process Room Pit Plan and Sections**		**9/01/99**
TCDS 51-302-02 Sheet 1 of 1	1600 Gallon Tank Waste Liquid System Plan and Assembly	A	10/05/88
TCDS 51-600-02 Sheet 1 of 2	TMF Piping Systems Plan	E	3/17/97
TCDS 51-600-02, Sheet 2 of 2	TMF Piping System Sections and Details	C	5/18/00
TCDS 51-700-01, Sheet 1 of 1	TMF Foundation Plan	C	9/01/89
TCDS 51-700-06, Sheet 1 of 1	TMF Sump Assembly and Section	B	8/06/95
TCDS 53-710-01, Sheet 1 of 2	Equipment Test Facility ECC Foundation Plans	C	5/21/81
TCDS 57-100-01, Sheet 1 of 1	Site Medical Facility Waste Liquid Storage System Plan		9/05/95
TCDS 57-202-01, Sheet 1 of 3	Permitted/~~Nom~~**Non**-Permitted Waste Tanks/Sumps Location Plan	J	11/16/05
TCDS 57-602-02, Sheet 1 of 1	MDF Sump3B, 9A and 9B Plan and Sections	C	10/18/01
TCDS 57-700-03, Sheet 1 of 1	MPF Sump 10C Details	A	10/03/01
TCDS 57-701-06 Sheet 1 of 1	**CTF Sumps 1A and 1B Modified Toxic Cubicle Plan**	**A**	**10/03/01**
TCDS 57-702-01, Sheet 1 of 2	MDF/BIF/MPF Sumps 3B, 9A, 9B, 9C, 9E, 9F Concrete Plan	A	10/03/01
TCDS 57-702-04, Sheet 1 of 1	MDF Sump 9E Sump and Tank Details	A	8/29/00
TCDS 57-702-06, Sheet 1 of 1	MDF Sumps 9C and 9F Assembly and Details	A	10/03/01
TCDS 57-702-07, Sheet 1 of 1	MDF Sump 9C Liner Assembly and Details	A	8/23/00

DEPARTMENT OF THE ARMY
US ARMY CHEMICAL MATERIALS AGENCY
DESERET CHEMICAL DEPOT
11500 Stark Road
STOCKTON, UT 84071

REPLY TO
ATTENTION OF:

29 June 2006

Engineering Division
99-0606-01

Mr. Dennis Downs
Executive Secretary
Department of Environmental Quality
Division of Solid and Hazardous Waste
P.O. Box 144880
Salt Lake City, Utah 84114-4880

The referenced drawings were originally prepared before I came to work for Deseret Chemical Depot and I cannot take responsibility for the design. I have reviewed the drawings and found them to fairly represent the existing conditions. There are a couple discrepancies between drawing dimensions but verifying the correct version would require an entry into the toxic area. I do not feel the risks justify the benefit. We will update the drawing with correct information after the next scheduled inspection.

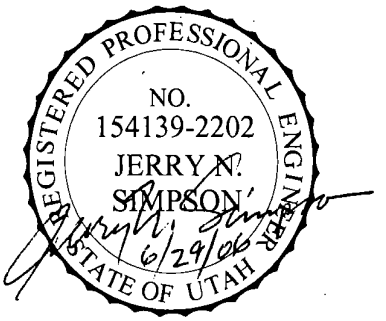
TCDS 39-705-05 Sh 1, CTF General Area Foundation Plan, Rev. A, 3/9/04

TCDS 39-700-02 Sh 1, CTF Process Area & Control Room Floor Plans, Orig., 8/11/99

TCDS 57-701-06 Sh 1, CTF Sumps 1A & 1B Modified Toxic Cubicle Plan, Rev. A, 10/03/01

TCDS 39-705-04 Sh 1, CTF Process Room Pit Plan & Section, Orig., 9/1/99

JERRY N. SIMPSON, P.E.
Chief, Mechanical Division



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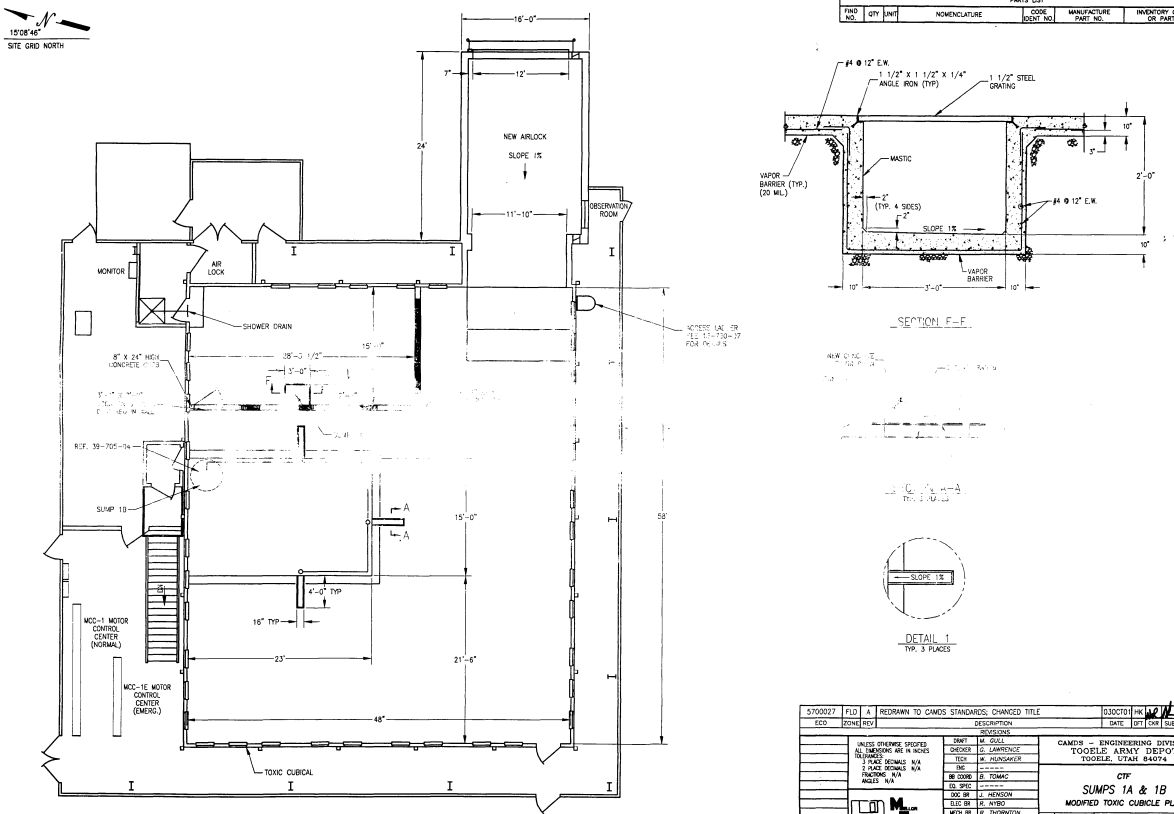


PARTS LIST

FIND NO.	QTY	UNIT	NOMENCLATURE	CODE IDENT. NO.	MANUFACTURE PART NO.	INVENTORY CONTROL OR PART NO.

ECO	ZONE	REV	DESCRIPTION	DATE	DFT	CKR	SUB	BBC	TOPL
5700027	FLD	A	REDRAWN TO CAMDS STANDARDS; CHANGED TITLE	030CT01	HK				

REVISIONS

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES TOLERANCES 2 PLACE DECIMALS N/A 3 PLACE DECIMALS N/A FRACTIONS N/A ANGLES N/A

NEXT ASSEMBLY

DRAFT	M. GULL
CHECKER	C. LAWRENCE
TECH	M. HUNSAKER
ENG	------
BB COORD	B. TOMAC
CG SPEC	------
DOC SPT	J. HENSON
CLIC SPT	K. NYBO
MECH SPT	R. THORNTON
ENG SPT	------
ENG CHK	D.W. GREEDER
TOPL	P. PEASNALL

CAMDS – ENGINEERING DIVISION
TOOELE ARMY DEPOT
TOOELE, UTAH 84074

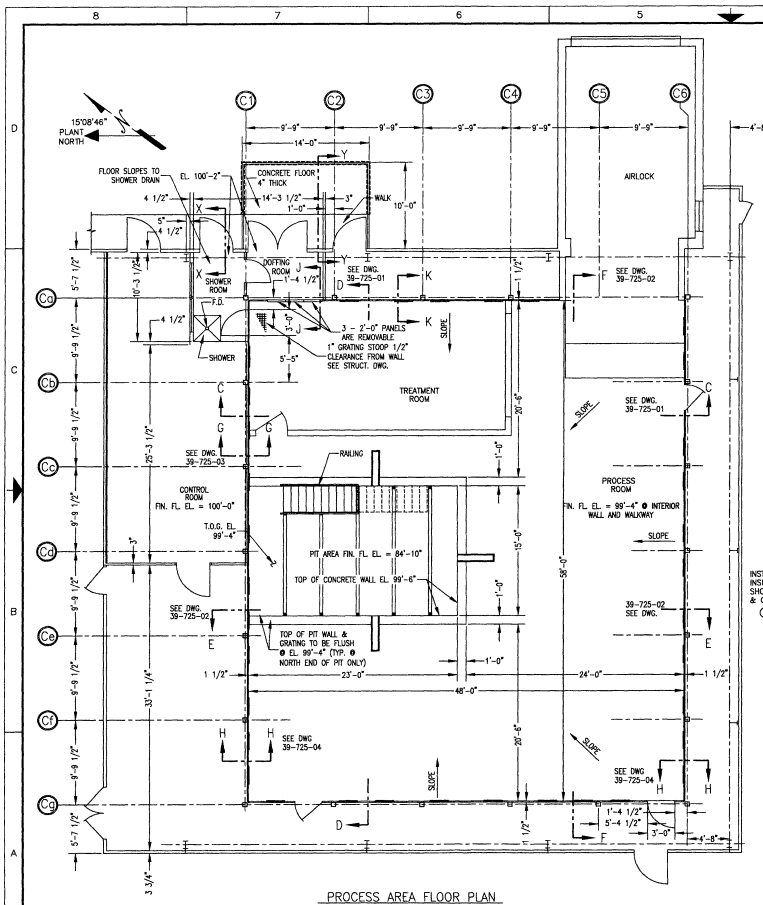
CTF

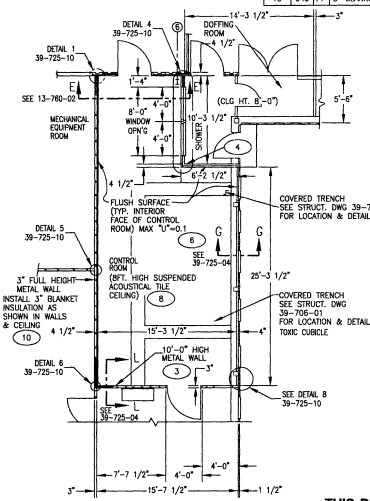
SUMPS 1A & 1B

MODIFIED TOXIC CUBICLE PLAN

SIZE	CODE IDENT NO.	DRAWING NO.	REV
F	81361	ECDS 57-701-06	A

SCALE 1/4"=1' DATE 14 JUNE 99 SHEET 1 OF 1





CONTROL ROOM FLOOR PLAN

PARTS LIST						
FIND NO.	QTY	UNIT	NOMENCLATURE	CODE IDENT NO.	MANUFACTURE PART NO.	INVENTORY CONTROL OR PART NO.
1	1550	EA	L.F. 16" STEELOX, ARMCO #362 OR EQUAL	82C		
2	440	EA	L.F. 16" STEELOX, ARMCO #362 OR EQUAL	82C		
3	120	EA	L.F. 16" STEELOX, ARMCO #362 OR EQUAL	82C		
4	104	EA	L.F. 16" STEELOX, ARMCO #362 OR EQUAL	82C		
5	32	EA	L.F. 16" STEELOX, ARMCO #362 OR EQUAL	82C		
6	632	EA	L.F. 16" METALINER	82C		
7	70	EA	L.F. Z GIRT	82C		
8	486	FT^2	2'x4' LAY-IN SUSPENDED ACOUSTICAL TILE	107C		
9	486	FT^2	VINYL ASBESTOS FLOOR TILE	108C		
10	940	FT^2	3" BLANKET INSULATION	FIELD		

NOTES:

1. STRUCTURAL STEEL SHALL BE ASTM A-36.
2. FABRICATION OF STEEL SHALL CONFORM TO THE REQUIREMENTS OF "AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
3. ALL WELDING WILL CONFORM TO THE "AMERICAN WELDING SOCIETY" CODE FOR WELDING IN BUILDING CONSTRUCTION AWS D1.1 REV 2-74 W/E 70-XX ELECTRODES. ALL WELDERS SHALL BE CERTIFIED PER THE CODE REQUIREMENTS.
4. BOLTS SHALL BE ASTM A-307 UNLESS OTHER-WISE SPECIFIED.
5. WINDOWS AND LIGHT PANELS IN CUBICLE SHALL BE "LUCITE" AR ABRASIVE RESISTANT SHEETS OR EQUAL.
6. SELF DRILLING - SELF TAPPING SCREWS SHALL BE I.T.W. - #12 (TEKS/S) OR APPROVED EQUAL. WITH TECK "TWIN SEAL" WASHERS.
7. WALL AND CEILING PANELS SHALL BE ZINC COATED H.H. ROBERTSON LONG SPAN "1.5DC 16-18" OR APPROVED EQUAL.
8. NEOPRENE GASKETS SHALL BE "DUPONT" 1/16 INCH NEOPRENE MEMBRANE OR EQUAL.
9. SEALANT SHALL BE RTV-732 OR G.E. SILICONE SEALANT #1200 OR APPROVED EQUAL.
10. CORNER FLASHING - 18 GA X 6" WIDE BENT PLATE - ATTACH WITH #12 SCREWS @ 12" O.C.
11. OPENINGS AS INDICATED ARE NOMINAL DIMENSIONS - SEE DETAILS FOR EXACT SIZES.

THIS DRAWING SUPERSEDES 13-761-01

ECO	ZONE	REV	DESCRIPTION	DATE	DFT	CKR	SUB	BBC	TDPL
			REVISIONS						

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES TOLERANCES: 3 PLACE DECIMALS: N/A 2 PLACE DECIMALS: N/A FRACTIONS: N/A ANGLES: N/A

DRAFT	M. GILL	9/16/99
CHECKER	G. LAWRENCE	
TECH	-------	
ENG	-------	
BB COORD	D. HERRERA	
EQ. SPEC	-------	
DOC BR	-------	
ELEC BR	R. NYBO	
MECH BR	J. SIMPSON	
ENG BR	-------	
ENG DIV	R. NYBO	
TDPL	N. LAWRENCE	

CAMDS - ENGINEERING DIVISION
TOOELE ARMY DEPOT
TOOELE, UTAH 84074

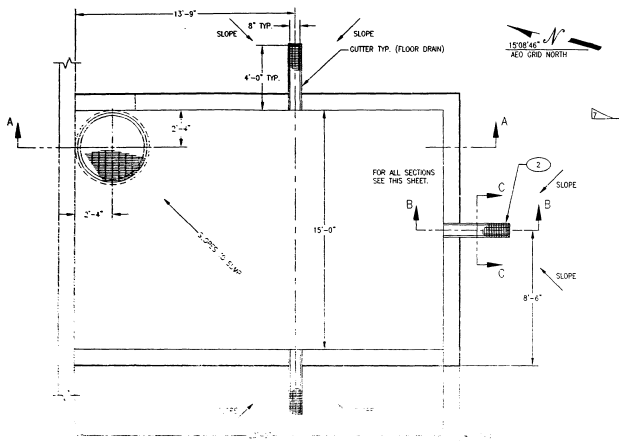
CTF

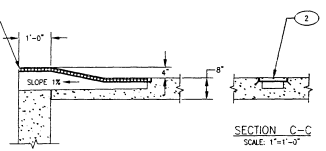
PROCESS AREA & CONTROL ROOM FLOOR PLANS

SIZE	CODE IDENT NO.	DRAWING NO.	REV
F	54931	TCDS 39-700-02	

SCALE: 1/4"=1'-0" DATE: 11 AUG 99 SHEET 1 OF 1

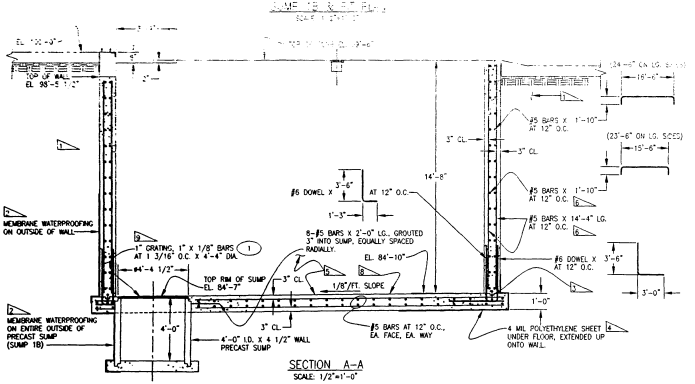
39-700-01
NEXT ASSEMBLY





SECTION B-B
SCALE: 1"=1'-0"

SECTION C-C
SCALE: 1"=1'-0"



SECTION A-A
SCALE: 1/2"=1'-0"

PARTS LIST

FIND NO.	QTY.	UNIT	NOMENCLATURE	CODE IDENT NO.	MANUFACTURE PART NO.	INVENTORY CONTROL OR PART NO.
1	1	EA	GRATING, 1" X 1/8" BARS AT 1 3/16" O.C. X 4'-4" DIA.			
2	3	EA	GRATING, 1 1/4" X 3/16" BARS AT 1"O.C.			

GENERAL NOTES

1. BACKFILL AROUND SUMP AND PIT WALLS SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D698. REFER TO PROVIDE LATERAL SUPPORT FOR WALLS DURING BACKFILL.

2. WATERSTOP BARRIER SHALL BE A WR PLAN EXTRUDED OR APPLIED LIQUID MEMBRANE WATERPROOFING [illegible]

3. [illegible] WATER STOP AT ALL CONSTRUCTION JOINTS.

4. [illegible] AT ALL WALL TO FLOOR JOINTS.

5. [illegible] SHALL BE LOCATED IN ZONE MARKED AND ALIGNED IN ACCORDANCE WITH THE LATEST AMERICAN CONCRETE INSTITUTE RECOMMENDATIONS FOR THE TYPE OF CEMENT FOR ALL CONCRETE IN CONTACT WITH THE NEAR-SURFACE SOILS

6. REINFORCING BARS SHALL BE GRADE 60, DEFORMED BARS IN ACCORDANCE WITH ASTM A615. PLACED WITH MINIMUM CLEARANCE OF 3 IN TO SURFACE OF CONCRETE

7. CHAMFER ALL EXPOSED CORNERS 3/4"

8. STEEL TROWEL FINISH ALL SLABS TO A SMOOTH HARD SURFACE. APPLY FLOOR HARDENER TO ALL SLABS

9. GRATING SHALL BE PRESS-LOCKED RECTANGULAR DESIGN, X-BAR TYPE, BY IRVING OR APPROVED EQUAL

10. GROUT SHALL BE NON-SHRINK, HIGH STRENGTH EMBECO #636 GROUT OR APPROVED EQUAL

THIS DRAWING SUPERSEDES DRAWING 13-771-01

ECO	ZONE	REV	DESCRIPTION	DATE	DFT	CHK	SUB	ERC	TDR
			REVISIONS						

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES
TOLERANCES:
2 PLACE DECIMALS: ±.010
3 PLACE DECIMALS: ±.005
FRACTIONS: ±1/32
ANGLES: ±0°30'

13-705-01
NEXT ASSEMBLY

DRAFT	D. NELSON	
CHECKER	D. LAWRENCE	
TECH	K. BERG	
ENG	M. BARRATT	
EB COORD	M. BARRATT	
TD. SPEC	------	
DOC BR	J. HENSON	
ELEC BR	R. NYBO	
MECH BR	R. THORNTON	
ENG BR	------	
ENG DIV	D.W. GREDER	
TDPA	V. PEASNALL	

CAMDO — ENGINEERING DIVISION
TOOELE ARMY DEPOT
TOOELE, UTAH 84074

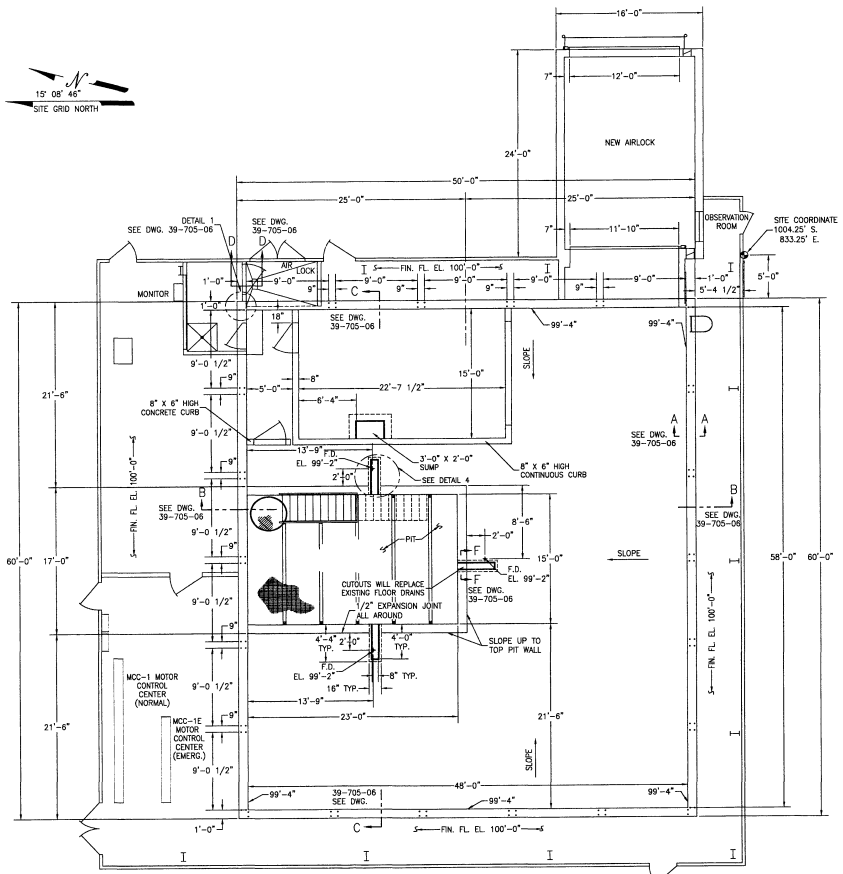
CTF

PROCESS ROOM PIT

PLAN & SECTIONS

SIZE	CODE IDENT NO	DRAWING NO	REV
F	54931	TCDS 39-705-04	

SCALE: NOTED | DATE: 1 SEP 99 | SHEET 1 OF 1



FLOOR PLAN

PARTS LIST

FIND NO.	QTY	UNIT	NOMENCLATURE	CODE IDENT NO.	MANUFACTURE PART NO.	INVENTORY CONTROL OR PART NO.

THIS DRAWING SUPERSEDES DRAWING 13-771-02

ECO	ZONE	REV	DESCRIPTION	DATE	DFT	DES	Sub	ENG	TOPL
3904001	A-6	A	DRAWING SUPERSEDES DRAWING 13-771-02	9MAR04					

REVISIONS

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES TOLERANCES: 3 PLACE DECIMALS: N/A 2 PLACE DECIMALS: N/A FRACTIONS: N/A ANGLES: N/A

DRAFT	----------
CHECKER	G. LAWRENCE
TECH	K. BERG
ENG	----------
BB COORD	G. GRAHAM
EQ. SPEC	----------
DOC BR	J. HENSON
ELEC BR	R. NYBO
MECH BR	R. THORNTON
ENG BR	----------
ENG DIV	D.W. GRIEDER
TOPL	V. PEASNALL

MILLER ENGINEERING CORP.

CAMDS – ENGINEERING DIVISION
TOOELE ARMY DEPOT
TOOELE, UTAH 84074

CTF

GENERAL AREA
FOUNDATION PLAN

SIZE	CODE IDENT NO.	DRAWING NO.	REV
F	54931	TCDS 39-705-05	A

SCALE: 1/4"=1'-0" DATE: 12 OCT. 99 SHEET 1 OF 1

NEXT ASSEMBLY

ATTACHMENT #12
CONTAINERS, STORAGE & WASTE PILES

12.1 HAZARDOUS WASTE STORAGE AREAS

Hazardous wastes received and generated at ~~U.S. Army~~ **the** Chemical Agent Munitions Disposal System (CAMDS) in support of test plans and projects are stored in the hazardous waste storage areas listed below. These storage areas have been constructed to meet all environmental standards. Storage of waste is maintained at levels consistent with the test projects in progress at any time. ~~As a project is completed,~~ **During completion of a project,** the wastes are collected**, stored,** and packaged appropriately~~,~~ for proper storage and disposal.

CAMDS ~~Hazardous~~ **hazardous** waste storage areas are listed below.

- Building 4104
- Building 4105
- Equipment Test Facility (ETF)
- **Chemical Test Facility**
- General Purpose Facility (GPF)
- Munitions Holding Area (MHA) Igloo
- Munitions Holding Area (MHA) Revetment Area
- Metal Parts Furnace (MPF) Area
- Residual Storage Area (RSA)
- Segregator/Explosive Containment Cubicle No. 1 (SEG/ECC No. 1) Unpack Area (UPA)
- Material Treatment Facility (MTF)
- Toxic Maintenance Facility (TMF)
- Ventilated Storage Area (VSA)

~~•Auxiliary Test Facility / Residual Storage Facility (ATF/RSF)~~

- Multipurpose Demilitarization Machine Processing Area and Conveyor Gallery (MDM/CG)
- MPF Charge Car Room

- Multipurpose Demilitarization Facility (MDF) Toxic Unpack Area (MDF Toxic UPA)
- Bulk Item Facility Drain Bay (BIF)
- MDF/BIF Airlock
- MDF/BIF Loading Area

The following subsections provide the required detailed information pertaining to these storage facilities. Building 4104 and 4105 are not located at the CAMDS site and are discussed separately.

12.2 BUILDING 4104 - HAZARDOUS WASTE STORAGE

Building 4104 is used to store wastes generated from the operation and maintenance of the CAMDS facility and other facilities located at Deseret Chemical Depot **(DCD)**. The building is also used to store components of process equipment that have been removed from CAMDS, but will be used again. All items (wastes and stored equipment) stored in building 4104 have been analyzed and found to be agent free using an extraction procedure or head space monitoring for waste streams which do not have an extraction procedure. The wastes can be described by the following EPA and State of Utah waste codes:

D001 (Ignitability)	D034 (Hexachloroethane)
D002 (Corrosivity)	D035 (Methyl Ethyl Ketone)
D004 (Arsenic)	D037 (Pentachlorophenol)
D005 (Barium)	D039 (Tetrachloroethylene)
D006 (Cadmium)	D040 (Trichloroethylene)
D007 (Chromium)	D043 (Vinyl Chloride)
D008 (Lead)	F001 (Spent Solvent Listings)
D009 (Mercury)	F002 (Spent Solvent Listings)
D010 (Selenium)	F003 (Spent Solvent Listings)
D011 (Silver)	F005 (Spent Solvent Listings)
D018 (Benzene)	U037 (Chlorobenzene)
D019 (Carbon Tetrachloride)	U044 (Chloroform)
D021 (Chlorobenzene)	U127 (Hexachlorobenzene)
D022 (Chloroform)	U131 (Hexachloroethane)
D027 (1,4-Dichlorobenzene)	U165 (Naphthalene)
D028 (1,2-Dichloroethane)	U210 (Tetrachloroethylene)
D029 (1,1-Dichloroethylene)	F999 (Residue from Demilitarization
D032 (Hexachlorobenzene)	of Chemical Agents)
	P095 (Phosgene)
	P999 (Chemical Warfare Agent)

The base of Building 4104 is divided into two sections for the purposes of waste management. One section is used to store drums of waste containing free liquids.

The other section is used to store process equipment (e.g. ducting, conveyor systems, electric motors, etc.) that have been removed from CAMDS but are intended to be reused.

12.2.1 Description of Containers

Hazardous wastes generated on-site are stored and offered for transportation in containers conforming to Department of Transportation (DOT) specifications. Containers used to store hazardous wastes in Building 4104 shall include:

- 8, 30, and ~~55~~ **55**-gallon steel drums with removable heads
- 8, 30, and ~~55~~ **55**-gallon steel drums without removable heads
- 85-gallon steel drums with removable heads (overpack drums)
- 85-gallon polyethylene drums with removable heads (overpack drums)
- 1, 3, 5, 8, 15, 30 and ~~55~~ **55**-gallon polyethylene drums without removable heads
- 1, 3, 5, 8, 15, 30, and ~~55~~ **55**-gallon polyethylene drums with removable heads
- 170-gallon ton containers
- Other ~~containers, which~~ **containers that** are DOT~~,~~ approved.

The selection of the appropriate drum for a particular waste is based on the compatibility of the container with the waste the container will hold, and the physical form of the waste. Liquid corrosive wastes are stored in polyethylene containers without removable heads. Liquid non-corrosive wastes are stored in steel drums without removable heads.

The following non-DOT containers may also be used at Building 4104 to store hazardous wastes with no free liquids:

- SPORT, Steel box with gasketed lid, overall size 100 in. long, 40 in. wide, 38 in. high.
- Lined wood or fiberboard crates and boxes.
- Plastic bags, polyethylene

NOTE: Plastic bag containers may be placed in wooden boxes or metal wire baskets, and stacked.

Liners may be reused after being cleaned, inspected, and verified as having no leaks.

Each container of hazardous waste will be labeled in accordance with EPA regulations.

12.2.2 Container Management Practices

Only containers of hazardous waste that have been analyzed for the presence of chemical agent (and the results of which show no agent detected) are stored in Building 4104. Containers are loaded on a flatbed or van type truck for transportation to the building. All

roads used by the vehicles transporting hazardous waste are within the facility boundaries and are paved.

Containers of hazardous waste are loaded on trucks using a forklift. Single barrels are moved either by equipping the forklift with barrel tongs, or by placing the container on a pallet prior to lifting. A single barrel placed on a pallet prior to movement will not be strapped to the pallet since the area available for storage on a pallet is four times greater than the area occupied by a single drum. The drum can be positioned in the center of the pallet, which maximizes the stability of the lifting platform (i.e., the pallet).

The risk of releasing a hazardous waste to the environment is minimized because:

- The roads used to transport wastes are in good repair and easy to negotiate with little traffic
- Flat bed trucks have railing around the bed to prevent containers from sliding off the bed
- Full drums are moved either on pallets or with forklifts equipped with barrel tongs, which minimizes the possibility of damaging the container during loading.

The facility has controlled access. The doors are locked and only authorized personnel are allowed access. Containers of hazardous waste are kept closed, and opened only to add or remove waste, or to collect additional samples. Inspections of container storage areas occur weekly, while hazardous waste is being stored, during which time, any container found to be deteriorating, or corroding is overpacked.

The storage arrangement that will be used to store containers holding hazardous wastes with free liquid is as follows (assuming all containers in storage area are ~~55~~ **55**-gallon drums):

- The area used to store containers of hazardous wastes with free liquids will be located on the southwest side of Building 4104, bordered by the back, side, and front walls, and be limited to an area measuring 22 ft. x 70 ft. (width of building).
- Secondary containment for containers will be provided by drip pans or flexible secondary containment products, with a maximum of eight containers per pan (i.e., two pallets of containers).
- All containers will be stored on pallets, with the containers and pallet being placed in a drip pan or flexible secondary containment.
- The maximum number of **55-gallon** drums per pallet is four. **(Smaller sizes will allow a larger number.)**
- The maximum number of pallets per row is nine.
- The maximum number of rows is three.

- Fifty-five gallon drums will be stacked no more than two high.
- A minimum aisle space of ~~2~~ **two** feet will be maintained between adjacent rows.

The maximum number of containers that can be stored using this arrangement is:

2 (stacks) x 4 (drums/pallet) x 9 (pallets/row) x 3 (rows) = 216 drums, or 11,880 gallons, or the equivalent volume of 216 ~~55~~**55**-gallon drums if other containers are used.

Containers other than ~~55-gallon~~**55-gallon**s will affect the storage arrangement since the use of larger containers will not allow for as tight a packing arrangement. If 85-gallon overpacks are used, the amount of maximum container storage will decrease because the uniform packing arrangement made possible by using all 55-gallon containers will be disrupted. Ton containers can be stacked up to four levels high (as in Area 10 igloos), using a pyramid-type (e.g., 6-5-4-3 bottom to top) arrangement elevated above the base and flexible secondary containment that meets the requirement for providing capacity to contain 10% of the volume of the ton containers or the volume of the largest container (170 gallons).

An area is kept clear in front of the rows to allow for space in the event that a container at the back of any must be retrieved. The pallets that were in front of the one **that** the particular container was on would be moved temporarily into this area, **and** then put back into the storage arrangement specified above after the sought after container was retrieved.

12.2.3 Inspections

There are two types of inspections performed. The first inspection is of the storage area itself and the second is of the containers. The storage area is inspected for warning signs, condition of the storage area and the containment system. The containers are inspected for leaks, deterioration, and general condition. Inspections of container storage areas occur weekly, while hazardous waste is being stored, during which time, any container found to be deteriorating, or corroding is overpacked and any deficiencies are noted. Any deficiencies observed during the inspection are noted on the inspection form and repairs or corrections are initiated within 24 hours. If a deficiency in the storage area secondary containment system is identified and corrective action is not initiated within the 24-hour timeframe, any hazardous waste stored in this area must be removed or an alternative means of secondary containment must be provided. Weekly storage area inspections are detailed in Attachment 5.

12.2.4 Secondary Containment System Design and Operation

The base of Building 4104 is completely enclosed by the building frame, which is comprised of a steel frame and roof, aluminum sided wood frame front wall, and cinder block back and sidewalls. The base is a bare concrete slab measuring 70 feet by 140 feet. Drainage is not provided for~~,~~ **and** there are no sumps, drains, or drain ditches poured into the concrete base. There is no containment berm surrounding the base where containers holding hazardous wastes with free liquids are stored.

Secondary containment is provided ~~for~~ by the use of drip pans or other flexible secondary containment products (see 12.4.3.1 for descriptions, dimensions, and capacities). Fifty-five gallon drums are stored four to a pallet; two pallets are placed in each drip pan, which provides secondary containment capacity equal to the volume of the largest container stored inside the drip pan. Ton containers can be stacked up to four levels high (as in Area 10 igloos), using a pyramid-type (e.g., 6-5-4-3 bottom to top) arrangement elevated above the base and flexible secondary containment that meets the requirement for providing capacity to contain 10% of the volume of the ton containers or the volume of the largest container (170 gallons).

The dimensions of the each drip pan are 56 in. x 56 in. x 5 in., which equals 68 gallons. The pallet placed inside the drip pan and used to elevate the container above any accumulated liquids displaces a volume of approximately 12 gallons leaving a secondary containment capacity of 56 gallons, which is the volume of the largest container inside the containment area.

The use of drip pans/flexible secondary containment in conjunction with a storage base that is made of concrete ~~and~~, elevated above the surrounding terrain, and is completely enclosed provides protection to the environment that is equivalent to an uncovered secondary containment area composed of a sealed concrete base and perimeter berm.

12.2.5 Containment System Drainage

There are no provisions for drainage in the design or construction of the base of Building 4104. The floor does not slope, nor are there any drains, gutters, or sumps. Liquids are prevented from accumulating on the base of Building 4104 by the building shell, the elevation of the base above the surrounding grade, and the drip pans/flexible secondary containment.

Drainage is not provided for in the drip pans/flexible secondary containment~~;~~. ~~however~~**However**, the containers, which use these systems for secondary containment, are elevated above the bottom of the secondary containment by an internal support and the pallet the containers are stored on. Accumulated liquids are removed from the drip pans/flexible secondary containment using an absorbent material.

12.2.6 Containment System Capacity

The net capacity of each drip pan is 56 gallons, which is a volume greater than the largest container inside the drip pan (55 gallons) and is also a volume greater than 10 percent of the total volume of containers stored inside the drip pan. Flexible secondary containment for ton containers or any container meets the requirement for providing capacity to contain 10% of the volume of the containers of the volume of the largest container.

12.2.7 Control of Run-on

Run-on to the drip pans/flexible secondary containment and storage base is controlled by **the following**:

(1) the base is elevated two feet above the surrounding grade;